



## Environmental Management Consolidated Business Center Ash Fall Project

Software Problem Reporting and Corrective Action

Procedure: AFP-AP-09  
Revision 0, 04/21/16

### Software Problem Reporting and Corrective Action

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**Revision: 0**

**Effective Date is 3 days after the date of approval**

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04/18/16  
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## 1.0 PURPOSE

This procedure establishes the responsibilities and process for identifying and correcting software problems.

## 2.0 SCOPE

The scope of this procedure includes software problems that are identified while using software in support of the Department of Energy Environmental Management Consolidated Business Center (EMCBC) Ash Fall Project supporting the Office of River Protection (ORP) Program.

## 3.0 APPLICABILITY

This procedure applies to EMCBC Ash Fall Project personnel who use software during work activities.

This procedure does not apply to software or firmware that meets any of the following conditions.

- Personal Productivity software, application software dedicated to producing information, such as documents, presentations, project scheduling, worksheets, databases, charts, graphs, digital paintings, electronic music and digital video, that has no impact on safety, security, or business risk. If the software fails, is not available or if the software produces invalid information, these conditions will not impact safety, security, or business risk.

## 4.0 REQUIREMENTS and REFERENCES

### 4.1 Requirements

4.1.1 EM-QA-001, *EM Quality Assurance Program (QAP)*

4.1.2 ASME NQA-1-2008/2009a, *Quality Assurance Requirements for Nuclear Facility Applications*

### 4.2 References

4.2.1 AFP-QAPP-01, *Quality Assurance Project Plan (QAPP)*

4.2.2 AFP-AP-06, *Software Management Control*

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4.2.2 AFP-AP-19, *Corrective Actions*

4.2.3 AFP-AP-20, *Quality Assurance Records*

### 5.0 DEFINITIONS and ACRONYMS

- 5.1 Software – Computer programs (including supporting operating systems, compilers, etc.), procedures, rules and associated documentation and data pertaining to the operation of a computer system.
- 5.2 Software Development Cycle – The activities that begin with the decision to develop a software product and end when the software is delivered. The software development cycle typically includes the following activities: (a) software design requirements, (b) software design, (c) implementation, (d) test, (e) sometimes installation.
- 5.3 Software Lifecycle – The period of time that begins when a software product is conceived and ends when the software is no longer available for use. The life cycle typically includes a concept phase, requirements phase, design phase, implementation phase, test phase, installation and checkout phase, operation and maintenance phase, and, sometimes, retirement phase. These phases may overlap or be performed iteratively, depending on the software development approach used.

### 6.0 RESPONSIBILITIES

- 6.1 Software User (Ash Fall Project Staff)
  - 6.1.1 Identifies software problems and initiates the Software Problem Report (SPR).
  - 6.1.2 Initiates a Corrective Action Report (CAR) (per AFP-AP-19, *Corrective Action*) if an adverse condition exists.
  - 6.1.3 Corrects the software problem.
  - 6.1.4 Notifies users of software problems.
- 6.2 QA Lead
  - 6.2.1 Reviews the SPR for completeness.

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## 7.0 GENERAL INFORMATION

None.

## 8.0 PROCEDURE

### 8.1 Identification of Software Problems

8.1.1 Upon identification of a potential or known software problem, the Software User attempts to replicate the problem to determine if the issue is an error in the software/code.

8.1.2 If the problem persists, the Software User will initiate an Attachment A, Software Problem Report (SPR).

### 8.2 Correction of Software Problems

8.2.1 The Software User reviews the SPR and initiates immediate action as needed.

8.2.2 For problems adverse to quality, the Software User shall initiate a Corrective Action Report in accordance with AFP-AP-19, *Corrective Actions* and notify the QA Lead for assistance.

8.2.3 If any output generated from the software has been submitted to the data tracking database, the Software User references the Data Tracking Number in the SPR and as applicable, the Corrective Action Report.

8.2.4 The Software User determines what to do with the software, considering the following options, and document the decision on the SPR.

A. Should the software be revised and removed from the baseline while the changes are being made?

B. Should the software be revised and remain on the baseline while the changes are being made?

C. Should the software be retired?

8.2.6 If software changes are required, the Software User initiates a Software Change Request in accordance with AFP-AF-06, *Software Management Control*.

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## 8.3 Notification of Software Problems

8.3.1 If it is software that has been purchased from a supplier, the Software User shall notify the vendor of the problem.

8.3.2 The Software User shall notify users of the software of the identified problem.

8.3.3 The Software User processes the records in accordance with Section 9.0.

## 8.4 Closure of the SPR

8.4.1 The Software User will complete the SPR and sign and date, indicating the issue has been resolved.

8.4.2 The QA Lead will review the SPR for completeness and sign and date the SPR.

## 9.0 RECORDS

9.1 The approved document in its entirety shall be submitted by the EMCBC Coordinator to records in accordance with AFP-AP-20, *Quality Assurance Records*.

9.2 The following are considered Lifetime QA Records:

- Software Problem Report

## 10.0 FORMS USED

Form 9-1 – Software Problem Report

## 11.0 ATTACHMENTS

Attachment A – Software Problem Report

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**Attachment A – Software Problem Report**

<b>Ash Fall Project AFP-AP-09, Form 9-1</b>		<b>SOFTWARE PROBLEM REPORT</b>		<b>Page    of</b>	
Date:		Software Name:		Software Version:	
Description of Problem:					
Action Taken:					
Software User Printed Name:		Software User Signature:		Date:	
QA Lead Printed Name:		QA Lead Signature:		Date:	

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## Form 12-1 – Record of Revision

DOCUMENT: AFP-AP-09, *Software Problem Reporting and Corrective Action*

Revision Number	Description of Changes	Revision on Pages	Effective Date
0	Initial Issue	All	04/21/2016